

## CURRENT LITERATURE.

## Minor Notices.

EVER SINCE homologies were known to exist between heterosporous pteridophytes and phanerogams the genus *Isoetes* has been one of peculiar interest, for it has seemed of all known pteridophytes most nearly related to phanerogams. Dr. Douglas H. Campbell, whose work in the life-histories of pteridophytes is well known, has made a careful study of the life-history of a species of *Isoetes* (*I. echinospora*, var. *Braunii*), and has published his results in *Annals of Botany* (Vol. V. no. 19, Aug. 1891), illustrated by three double plates. He has traced the development of the male prothallium, the macrospore and female prothallium, and the embryo as to its leaf, root, and foot). While the details of technique are both interesting and instructive, for the subject was beset with unusual difficulties of manipulation, the interest naturally centers about the conclusions with regard to the relationship of *Isoetes*. The genus has been ordinarily placed among the Lycopodineæ, although Vines has called attention to its closer relationship to Filicineæ, to which latter view Campbell also inclines, and his results seem to bear him out in this view. However, *Isoetes* still seems widely isolated at best, and its relationship to Filicineæ, while nearer than to any other pteridophyte group, may still be considered a somewhat distant one. While nearest to the Filicineæ, it still seems to have closer homologies with phanerogams than any other pteridophyte. Campbell has succeeded in making the very important point that these homologies are with the monocotyledons rather than with the gymnosperms, thus emphasizing the notion of the independent origin of the angiosperms from the pteridophytes and the further notion of the origin of monocotyledons from the Filicineæ through such forms as *Isoetes*. Of course the intervals are still far too great for definite conclusions, but these results with *Isoetes* are full of suggestions for future investigations.

THE SEVENTEENTH contribution from the cryptogamic laboratory of Harvard University is by William Albert Setchell, under the title "Concerning the life-history of *Saccorhiza dermatodea*." It is a reprint from *Proc. Am. Acad.* xxvi., distributed September, 1891. It deals with a very complex and polymorphous member of the Laminariæ. Dealing first with its discovery by De la Pylaie, its distribution, habitat, and season, the author treats its morphology under four periods, each characterized by some important changes in development. Then follows a complete account of the histology of each of these per-

iods, and then a discussion of relationships to certain specific forms and other Laminariæ in general. That the species is a polymorphic and somewhat confusing one may judge by the fact that in literature it appears under five generic names with nine different specific combinations.

IN AN ARTICLE entitled "The vitality of some annual plants," reprinted from the October number of the American Journal of Science, Mr. Theo. Holm instances a number of annual plants of which he has found individuals having arrangements for living over winter.

MR. HENRY EGGERT has published a catalogue of the Phanerogams and Pteridophytes in the vicinity of St. Louis, the radius being about 40 miles. This is the first complete list of this interesting region since Geyer's Catalogue of 1842. The list contains about 1100 species, and Mr. Eggert's long and patient study of the St. Louis flora insures a list both complete and accurate.

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## NOTES AND NEWS.

DR. AUG. F. FOERSTE sailed for Europe the middle of last month, and is now at the Collège de France, Paris.

ON PAGE 273 the GAZETTE tried say that Mr. T. *Kirk* of Wellington, New Zealand, was preparing plants of that country for distribution at 45 shillings per century.

DR. ARTHUR MEYER has been called to the professorship of botany in the University of Marburg. Dr. F. G. Kohl, heretofore *privat-docent*, has been made assistant-professor.

DR. HERMANN HOFFMANN, professor of botany in the University of Giessen, is dead at the age of 72. Plant climatology, geography and phænology are the branches to which he gave especial attention. Indeed the latter subject owes most of its present development to his labors.

THREE of the six established scholarships for garden pupils of the Missouri Botanical Garden (St. Louis) are to be awarded before the first of April next. Those who desire full information concerning the great advantages offered by these scholarships, and the conditions upon which they are awarded, should address the Director, Dr. William Trelease.

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<sup>1</sup> pp. 292 — 309, with plate XIII.